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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,936	07/14/2003	Andreas Bacher	WAS 0595 PUS	6648
22045	7590	06/16/2005	EXAMINER	
BROOKS KUSHMAN P.C. 1000 TOWN CENTER TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075			RONESI, VICKEY M	
			ART UNIT	PAPER NUMBER
			1714	

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/618,936	Applicant(s) BACHER ET AL.	
	Examiner Vickey Ronesi	Art Unit 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/27/03, 11/10/03, 12/14/03</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Information Disclosure Statement

1. The Information Disclosure Statements filed 10/27/2003, 11/10/2003, and 12/12/2003 have been considered. On the IDS filed 10/27/2003, that EP 0 076 940 has been stricken since the patent is incorrectly cited (note that the correct patent number is EP 0 076 490 which is cited on IDS filed 11/10/2003). The corresponding Derwent Abstract has also been stricken from the IDS. On the IDS filed 12/12/2003, EP 1 127 706 has been stricken since it was already cited on IDS filed 10/27/2003.

Claim Objections

2. Claim 5 is objected to because the language used to describe the number of carbon atoms is consistent, e.g., C₁ to C₃ compared to C₁₋₃. Moreover, the numeral "12" in line 7 of the claim is believed to be extraneous and should be deleted. In addition, the language "be interrupted" in lines 7-8 should be replaced with "is interrupted."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 5, the use of “R₃” in line 7 of the claim causes confusion since it is not understood how R³ is itself (but with a subscript rather than a superscript) or if R₃ is the acyl radical. Moreover, the phrases “C₂₋₁₂ acyl radical R₃ optionally be [sic] interrupted by an ether group” in lines 7-8 and “the carbon chain is interrupted by an O or N atom” in line 12-13 cause confusion since it is not clear what is interrupted. In addition, the phrase “C₁₋₄₀ alkoxy group optionally substituted by further heterocycles” in the last line of claim causes confusion since it is not clear whether the heterocycles substitute the C₁₋₄₀ alkoxy groups or if the heterocycles are pendently attached along the alkoxy group.

With respect to claim 11, it is rejected for being dependent on a rejected claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Tschirner et al (US 6,211,289).

Tschirner et al discloses polyvinyl acetals derived from the acetylation of saponified polyvinyl acetates (i.e., polyvinyl alcohols) containing 1-alkylvinyl acetate-vinyl acetate copolymer in a weight ratio of 1:99 to 40:60 (col. 2, lines 1-44) and additional comonomer units in an amount from 1 to 5 wt % (col. 2, lines 54-59). Note Table 3 bridging cols. 11 and 12 wherein the viscosity and amount of alkylvinyl alcohol for the polyvinyl alcohol is exemplified.

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Moreover, note that the PVOH is disclosed as being silylated with bistrimethylsilylacetamide (col. 11, lines 31-33). Although Tschirner et al does not teach the relative amount of bistrimethylsilylacetamide, note that it teaches that additional comonomers are present in an amount from 1 to 5 wt %, wherein the bistrimethylsilylacetamide is a functional group of the additional comonomer. The polymer is prepared as disclosed in col. 3, lines 6-54.

In light of the above, it is clear that Tschirner et al anticipates the presently cited claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schilling et al (US 4,879,336) in view of Maruyama et al (US 4,617,239).

Schilling et al discloses a coating slip composition for printing bases such as paper (col. 2, lines 27-30) prepared by the method disclosed in col. 3, lines 22-44, wherein the composition comprises a cobinder polymer containing 50-95 wt % vinyl alcohol units, 5-50 wt % of 1-alkylvinyl alcohol units of 1-4 alkyl carbon atoms, and 0-5 wt % of other polymerizable monomers (col. 2, lines 36-65) which is preferably fully saponified with a Hoppler viscosity of 4-10 mPas (col. 1, line 61 to col. 2, line 4).

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Schilling et al does not disclose the use of an ethylenically unsaturated silane-containing monomer, however, note that it is open to the use of any suitable additional monomer (col. 2, lines 45-46).

Maruyama et al discloses a paper coating agent and teaches that a modified polyvinyl alcohol containing silicon (co. 3, line 12 to col. 6, line 28) imparts water resistance, printability, surface strength, and barrier properties to a coated paper (col. 1, lines 9-40; col. 2, lines 8-13) when present in an amount of 0.01-10 mol % of the polyvinyl alcohol (col. 2, lines 58-61). It is presumed that the improvement in the aforementioned properties is due to a reaction between the silicon portion of the modified PVOH with the paper substrate which provides for a firm uniform surface layer that does not penetrate into the paper (col. 9, line 8-26).

Given that Schilling et al is open to the use of another monomer and given the benefits of utilizing an ethylenically unsaturated silane-containing monomer in the PVOH binder as taught by Maruyama et al, it would have been obvious to one of ordinary skill in the art to utilize a silane-containing monomer in the polyvinyl alcohol of Schilling et al and thereby arrive at the present invention.

Note that the phrase "suitable for use in ink jet printing" in instant claim 15 is intended use which is given no patentable weight. Reegardless, it is considered that it would have been obvious to one of ordinary skill in the art to utilize Schilling et al's paper in such a common paper printing application, there being no evidence or suggestion otherwise.

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Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

6/9/2005

vr



Vasu Jagannathan
VASU JAGANNATHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700